

SEQUENCE LISTING

<110> Okazaki National Research Institutes

<120> Method for producing a biosensor protein capable of regulating a fluorescence property of Green Fluorescent Protein, and the biosensor protein produced by the method.

<130> A000004913

<150> JP/2000-356047

<151> 2000-11-22

<160> 12

<170> PatentIn Ver. 2.0

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<212> DNA

<213> Aequorea victoria

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<221> CDS

<222> (1)..(717)

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gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc gag 96
 Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
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ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc tgc 144
 Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
 35 40 45

acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc ctg 192
 Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu
 50 55 60

acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag cag 240
 Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln
 65 70 75 80

cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag cgc 288
 His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
 85 90 95

acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag gtg 336
 Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
 100 105 110

aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc atc 384
 Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
 115 120 125

gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac aac 432
 Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
 130 135 140

jac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac ggc 480
 Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly
 145 150 155 160

atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc gtg 528
 Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
 165 170 175

cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc ccc 576
 Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
 180 185 190

gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg agc 624
 Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
 195 200 205

aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc gtg 672
 Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
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<213> Rattus norvegicus

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aga gct ata ggt cgg ctg agc tca ctc gag aac gtc tat atc atg gcc 96

Arg Ala Ile Gly Arg Leu Ser Ser Leu Glu Asn Val Tyr Ile Met Ala

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gac aag cag aag aac ggc atc aag gtg aac ttc aag atc cgc cac aac 144

Asp Lys Gln Lys Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn

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atc gag gac ggc agc gtg cag ctc gcc gac cac tac cag cag aac acc 192

Ile Glu Asp Gly Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr

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ccc atc ggc gac ggc ccc gtg ctg ctg ccc gac aac cac tac ctg agc 240

Pro Ile Gly Asp Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser
 65 70 75 80

 acc cag tcc gcc ctg agc aaa gac ccc aac gag aag cgc gat cac atg 288
 Thr Gln Ser Ala Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met
 85 90 95

 gtc ctg ctg gag ttc gtg acc gcc gcc ggg atc act ctc ggc atg gac 336
 Val Leu Leu Glu Phe Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp
 100 105 110

 gag ctg tac aag ggc ggt acc gga ggg agc atg gtg agc aag ggc gag 384
 Glu Leu Tyr Lys Gly Gly Thr Gly Gly Ser Met Val Ser Lys Gly Glu
 115 120 125

 gag ctg ttc acc ggg gtg gtg ccc atc ctg gtc gag ctg gac ggc gac 432
 Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu Leu Asp Gly Asp
 130 135 140

 gta aac ggc cac aag ttc agc gtg tcc ggc gag ggc gag ggc gat gcc 480
 Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly Glu Gly Asp Ala
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 acc tac ggc aag ctg acc ctg aag ttc atc tgc acc acc ggc aag ctg 528
 Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr Thr Gly Lys Leu
 165 170 175

 ccc gtg ccc tgg ccc acc ctc gtg acc acc ctg acc tac ggc gtg cag 576
 Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu Thr Tyr Gly Val Gln
 180 185 190

 tgc ttc agc cgc tac ccc gac cac atg aag cag cac gac ttc ttc aag 624

Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln His Asp Phe Phe Lys
195 200 205

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Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr Ile Phe Phe Lys
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Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys Phe Glu Gly Asp
225 230 235 240

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Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp Phe Lys Glu Asp
245 250 255

ggc aac atc ctg ggg cac aag ctg gag tac aac acg cgt gac caa ctg 816
Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Thr Arg Asp Gln Leu
260 265 270

act gaa gag cag atc gca gaa ttc aaa gaa gct ttc tcc cta ttt gac 864
Thr Glu Glu Gln Ile Ala Glu Phe Lys Glu Ala Phe Ser Leu Phe Asp
275 280 285

aag gac ggg gat ggg aca ata aca acc aag gag ctg ggg acg gtg atg 912
Lys Asp Gly Asp Gly Thr Ile Thr Thr Lys Glu Leu Gly Thr Val Met
290 295 300

cgg tct ctg ggg cag aac ccc aca gaa gca gag ctg cag gac atg atc 960
Arg Ser Leu Gly Gln Asn Pro Thr Glu Ala Glu Leu Gln Asp Met Ile
305 310 315 320

aat gaa gta gat gcc gac ggt aat ggc aca atc gac ttc cct gaa ttc 1008

Asn Glu Val Asp Ala Asp Gly Asn Gly Thr Ile Asp Phe Pro Glu Phe

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ctg aca atg atg gca aga aaa atg aaa gac aca gac agt gaa gaa gaa 1056

Leu Thr Met Met Ala Arg Lys Met Lys Asp Thr Asp Ser Glu Glu Glu

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att aga gaa gcg ttc cgt gtg ttt gat aag gat ggc aat ggc tac atc 1104

Ile Arg Glu Ala Phe Arg Val Phe Asp Lys Asp Gly Asn Gly Tyr Ile

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agt gca gca gag ctt cgc cac gtg atg aca aac ctt gga gag aag tta 1152

Ser Ala Ala Glu Leu Arg His Val Met Thr Asn Leu Gly Glu Lys Leu

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aca gat gaa gag gtt gat gaa atg atc agg gaa gca gac atc gat ggg 1200

Thr Asp Glu Glu Val Asp Glu Met Ile Arg Glu Ala Asp Ile Asp Gly

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gat ggt cag gta aac tac gaa gag ttt gta caa atg atg aca gcg aag 1248

Asp Gly Gln Val Asn Tyr Glu Glu Phe Val Gln Met Met Thr Ala Lys

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tga

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<223> Primer for myosin light chain kinase M13

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aggtcacgca gtcaga 66

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gtgacctgtc tt 62

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<212> DNA

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<223> Primer for GFP

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<223> Primer for calmodulin

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<223> Primer for calmodulin

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gcgcggccgc tcacttcgct gtcattcattt gtac

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